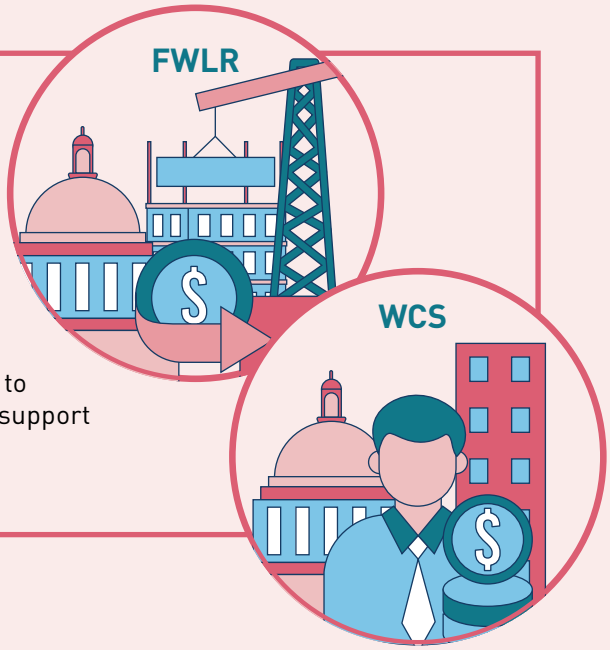
IMPACT OF FOREIGN WORKER LEVY REBATE AND WAGE CREDIT SCHEME DURING THE COVID-19 PANDEMIC

INTRODUCTION

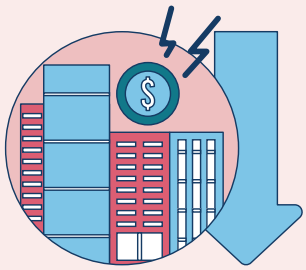
To ensure that firms were able to retain enterprise capabilities to emerge stronger from the COVID-19 pandemic, the Government provided Foreign Worker Levy Rebate (FWLR) to employers during the crisis, particularly for firms in the Construction, Marine Shipyard and Process sectors. Meanwhile, the Wage Credit Scheme (WCS), which was introduced in Budget 2013 as a transitional salary support scheme to help firms adjust to rising costs as they restructure, was enhanced in 2020 to further support workers and businesses during the pandemic.



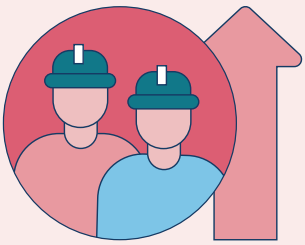
FINDINGS FINDINGS

FWLR

The FWLR reduced the likelihood of firms facing financial distress and supported the hiring and retention of Work Permit and S Pass Holders in the construction sector.



Reduced likelihood of firm financial distress

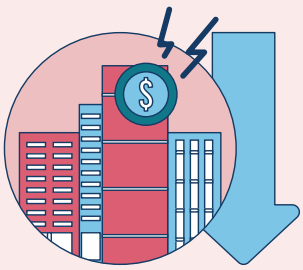


Hiring and retention of Work Permit and S Pass Holders in the construction sector

WCS

The WCS reduced the likelihood of firms facing financial distress and supported the hiring of local workers earning less than $5,000.

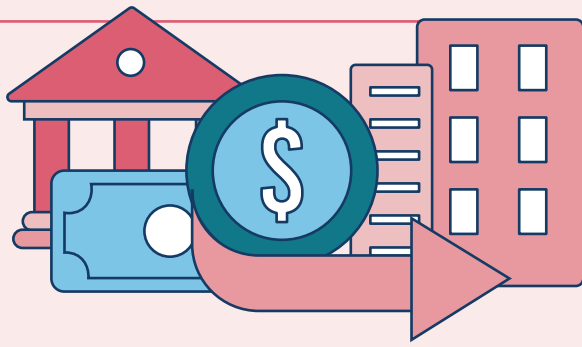
Hiring and retention of local workers



Reduced likelihood of firm financial distress

POLICY TAKEAWAY

This study highlights the importance of providing cash transfers to firms to help them fulfil short-term cash obligations and retain workers (and hence capabilities) during times of heightened economic stress.



EXECUTIVE SUMMARY

- Using a set of high-frequency (monthly) firm-level indicators and scheme disbursement data, this study examines the impact of the foreign worker levy rebates (FWLR) and Wage Credit Scheme (WCS) payouts disbursed during the COVID-19 pandemic on firm-level outcomes.
- We found that both the FWLR and WCS payouts helped to lower the likelihood of firm financial distress and also supported the hiring and retention of workers, especially Work Permit and S Pass Holders in the construction sector in the case of the FWLR, and local workers earning less than $5,000 in the case of the WCS. This highlights the importance of providing cash transfers to firms to help them fulfil short-term cash obligations and retain workers (and hence capabilities) during times of heightened economic stress.
- The high-frequency nature of this analysis implies that the estimated impact of the schemes should be seen as the short-term impact and is meant to provide a prompt sensing of their effectiveness during the pandemic. A more comprehensive study to analyse the longer-term benefits and costs of the schemes should be conducted once annual data on firm-level outcomes (e.g., financial information, value-added) are available.

The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry (MTI) or other government agencies.[1]

INTRODUCTION

At the onset of the COVID-19 pandemic, governments around the world implemented public health measures such as border closures and lockdowns to stem the spread of the virus. These measures severely disrupted business activities in many sectors, especially those in consumer-facing, tourism-related and aviation-related sectors. The resulting supply-side shocks also triggered demand-side shocks, as the disruptions in economic activity alongside the uncertainty brought on by the pandemic led to layoffs and a pullback in global consumption and investment demand. To cushion the impact of these shocks on households and firms, governments worldwide rolled out a range of stimulus measures, including tax rebates and cash transfer payments. For the policies targeted at firms, they were broadly aimed at helping to ease the cashflow concerns of firms and/or to support them in retaining capabilities (e.g., workers with experience and skills) to prevent longer-term economic scarring that would have occurred had they lost these capabilities.

In Singapore, to help employers retain and care for their foreign workers during the Circuit Breaker (CB) period[2], the Government announced in April 2020 that it would provide foreign worker levy rebates (FWLR) to employers as part of the Solidarity Budget[3]. The rebate was initially set at $750 per month for each Work Permit Holder (WPH) or S Pass Holder (S Pass) and was given to firms in all sectors from April to June 2020, before being stepped down to $375 per month in July 2020, after Singapore exited the CB. From August 2020 onwards, the rebate was provided only to firms in the Construction, Marine Shipyard and Process (CMP) sectors (Exhibit 1). This is because firms in these sectors had a high level of dependence on foreign workers and continued to face manpower disruptions due to COVID-19-related restrictions. For instance, construction firms were required to segregate their workers into teams and were not allowed to cross-deploy workers across multiple worksites, which in turn weighed on their productivity and activity levels.

1 *We would like to thank MOM and MOF for their inputs to this study and acknowledge the contributions of Mr Tan Di Song and Mr Kuhan Harichandra to the study. We would also like to thank Ms Yong Yik Wei for her useful suggestions and comments. All errors belong to the authors.*

2 *CB measures were implemented from 7 April to 1 June 2020 to stem the rise in domestic COVID-19 infections. These measures included the suspension of non-essential services and the closure of most workplace premises.*

3 *Concurrently, the Government gave all firms a full 100 per cent foreign worker levy waiver in March and April 2020. The waiver remained at 100 per cent for all firms in the CMP sectors from May to September 2020, before being progressively stepped down to 75 per cent in October 2020, 50 per cent in November 2020, and 25 per cent in December 2020.*

Meanwhile, the Wage Credit Scheme (WCS), which was introduced in Budget 2013 as a transitional salary support scheme to help firms adjust to rising costs as they restructure, was enhanced in Budget 2020 to further support workers and businesses during the pandemic. Under the WCS, the Government would co-fund a portion of the wage increases (co-funding ratio) of Singapore Citizen employees, up to a certain gross monthly wage level (gross wage ceiling), with the co-funding amount disbursed to firms in the form of annual cash payouts. In Budget 2020, the co-funding ratio for wage increases in 2019 and 2020 was raised by 5 percentage-points (pp) to 20 per cent and 15 per cent respectively, and the gross wage ceiling was raised from $4,000 to $5,000, thus enabling more firms to receive the WCS payout (Exhibit 1). As the 2020 WCS was paid out in March 2020, prior to the announcement of these enhancements, only the additional payout arising from the higher co-funding ratio and wage ceiling was disbursed in June 2020. This provided additional liquidity to firms that had raised the wages of their Singaporean Citizen employees prior to the COVID-19 pandemic. In 2021, even though the WCS co-funding ratio was tapered down to 15 per cent, the gross wage ceiling was maintained at $5,000. The WCS payout that was made in March 2021 thus continued to provide liquidity assistance to firms that had raised the wages of eligible employees in 2020.

Exhibit 1: Details and Timeline of Foreign Worker Levy Rebate and Wage Credit Scheme Payouts (March 2020 to May 2022)

Scheme	March 2020	April to June 2020	July 2020	August to September 2020	October 2020 to April 2021	May 2021 to May 2022
Foreign Worker Levy Rebate		$750 per WPH or S Pass, for firms in all sectors.	$375 WPH or S Pass, for firms in all sectors.^	$375 per WPH or S Pass, for firms in CMP sectors only.	$90 per WPH, for firms in CMP sectors only.	$250 per WPH, for firms in CMP sectors only.
Wage Credit Scheme	2020 WCS payout (March 2020): Co-funding ratio of 15 per cent for wage increase in 2019. Gross wage ceiling of $4,000.	Enhanced WCS 2020 payout (June 2020): Co-funding ratio of 20 per cent for wage increase in 2019. Gross wage ceiling of $5,000. Additional payout in 2020 due to the higher co-funding ratio and wage ceiling announced in Budget 2020.			2021 WCS payout (March 2021): Co-funding ratio of 15 per cent for wage increase in 2020. Gross wage ceiling of $5,000.	

^: FWLR in July 2020 was restricted to businesses that were not allowed to resume operations after Circuit Breaker.

The FWLR and WCS were akin to cash transfers that were provided to help firms cope with the varying impact of the COVID-19 pandemic as it unfolded. For instance, while the FWLR was initially disbursed to all firms that hired WPHs and S Passes to help them cope with the CB restrictions, it was subsequently extended only for firms in CMP sectors because they were especially affected by the worksite restrictions imposed by the Government. Likewise, while the Enhanced WCS payout in June 2020 could have helped firms to cope with operating expenses during the initial months of the pandemic when demand and revenues plunged, the 2021 WCS payout was intended to support firms that had transformed their businesses and raised their employees' wages as the economy recovered.

A previous study by Koh (2022) examined the impact of Enterprise Singapore's (ESG) loan financing schemes[4] on monthly firm-level outcomes, including firm financial distress and employment. We extended this study to examine the impact of the FWLR and WCS payouts on firms using the same firm-level indicators. This would help to shed light on whether the FWLR and WCS payouts helped to keep firms afloat and enabled them to retain manpower capabilities during the COVID-19 recession.

In the past, such impact evaluation analyses would have been carried out with a significant time lag due to the use of annual data on firm-level outcomes that are compiled with a time lag. Given the unprecedented scale of the economic fallout from the COVID-19 pandemic and the fast-evolving health situation, there was a need to use available high-frequency indicators to obtain a timely analysis of the impact of the schemes put in place to help firms and workers so as to calibrate the Government's responses to the pandemic more effectively[5]. Nonetheless, given the high-frequency and short-term nature of the analysis, it will be useful to carry out a more comprehensive longer-term analysis once annual firm-level data (e.g., financial information, value-added) is available.

DATA AND SUMMARY STATISTICS

To carry out this analysis, a set of high-frequency (monthly) firm-level data was assembled. The key firm-level outcome indicators in the dataset were (i) a binary indicator of firm financial distress constructed from various data sources, which indicates whether a firm was prompt in meeting its payment obligations in a particular month (Exhibit 2); and (ii) firms' employment levels based on data from the Central Provident Fund Board (CPFB) and Ministry of Manpower (MOM). The high-frequency firm-level outcome indicators were matched to administrative data on the disbursements made to firms under the FWLR, WCS and other government support schemes, including the Jobs Support Scheme (JSS)[6] and ESG's financing schemes. The study covers the period from September 2019 to August 2021.

Exhibit 2: Data Used in the Construction of the Firm Financial Distress Indicator

Firm-level outcome	Source	Frequency
CPF late payments	CPFB	Monthly
Rental arrears	JTC	
Electricity payment arrears	EMA	
Foreign worker levy default	MOM	

Note: A firm was identified to be in financial distress, in a particular month, if the firm (1) was late in making employer's CPF contribution for the month; or (2) had defaulted on its payment of foreign worker levy; or (3) had an increase in outstanding JTC rental arrears or electricity payment arrears owed to SP Group as compared to the previous month.

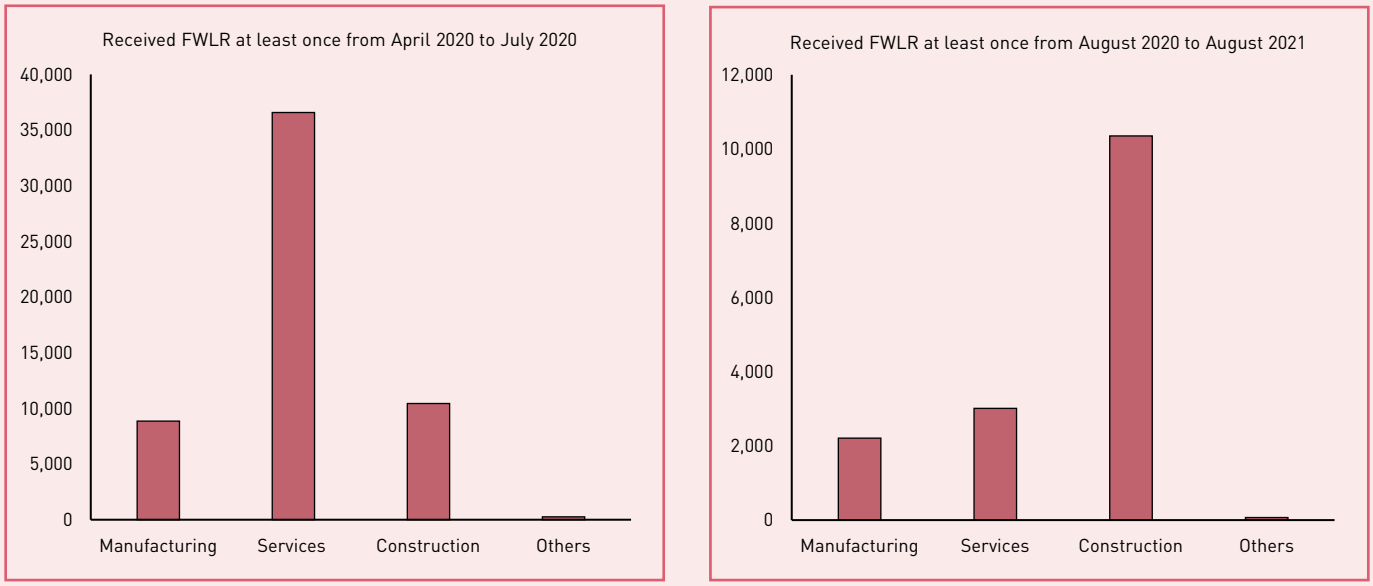
FWLR. Over the period of April 2020 to August 2021, a total of 56,095 firms received the FWLR. From April 2020 to July 2020, which covered the CB period, most FWLR recipients were from the services sector. This is not surprising as the services sector accounted for the employment of 44.5 per cent of all WPHs and S Passes as of December 2019. However, following the tightening of eligibility requirements in August 2020 to only include firms in the CMP sectors, most FWLR recipients were from the construction sector (Exhibit 3). The bulk of the FWLR recipients were also smaller firms with no more than 50 employees (Exhibit 4). Compared to non-recipients, FWLR recipients had a higher proportion of firms in financial distress prior to the pandemic and also higher average employment levels (Exhibit 5).

4 *These schemes included the Temporary Bridging Loan Programme (TBL) and the enhancement to the Financing Scheme – Working Capital Loan (EWCL), which were introduced by the Singapore Government with the goal of expanding risk-sharing arrangements with participating financial institutions in order to provide working capital to eligible firms, especially SMEs, during the pandemic.*

5 *Examples of high-frequency impact evaluations overseas include Chetty et al. (2020), which used data from credit card processors, payroll firms, job posting aggregators and financial services firms to evaluate the US Government's COVID-19 policies; or Meng (2021), which used high-frequency survey data on firms' revenue and employee hours to evaluate the Small Business Administration assistance programmes in the US. Ebeke et al. (2021) used detailed balance sheet and income statement data to conduct similar evaluations of Europe's COVID-19 policies and found that corporate sector relief measures significantly reduced liquidity shortfalls and helped to mitigate job and output losses.*

6 *While the impact of the JSS is not examined in this study, the JSS payout was used as a control variable in the estimation methodology. For more information on the impact of JSS on firm-level outcomes, see Pang et al. (2021).*

Exhibit 3: Number of FWLR Recipients by Sector[7], April 2020 to August 2021



Notes: Data is as of August 2021. "Others" include Utilities, Postal and Courier sectors.
Source: MOM

Exhibit 4: Number of FWLR Recipients by Total Employment Size, April 2020 to August 2021

Total Employment Size	FWLR
	Number of firms
≤10	39,102
11-50	16,638
51-100	1,938
>100	1,937

Notes: Total employment is based on firm's employment size as at December 2019.
Source: Authors' calculation, based on data from MOM and CPFB.

Exhibit 5: Key Firm Characteristics of FWLR Recipients and Non-Recipients

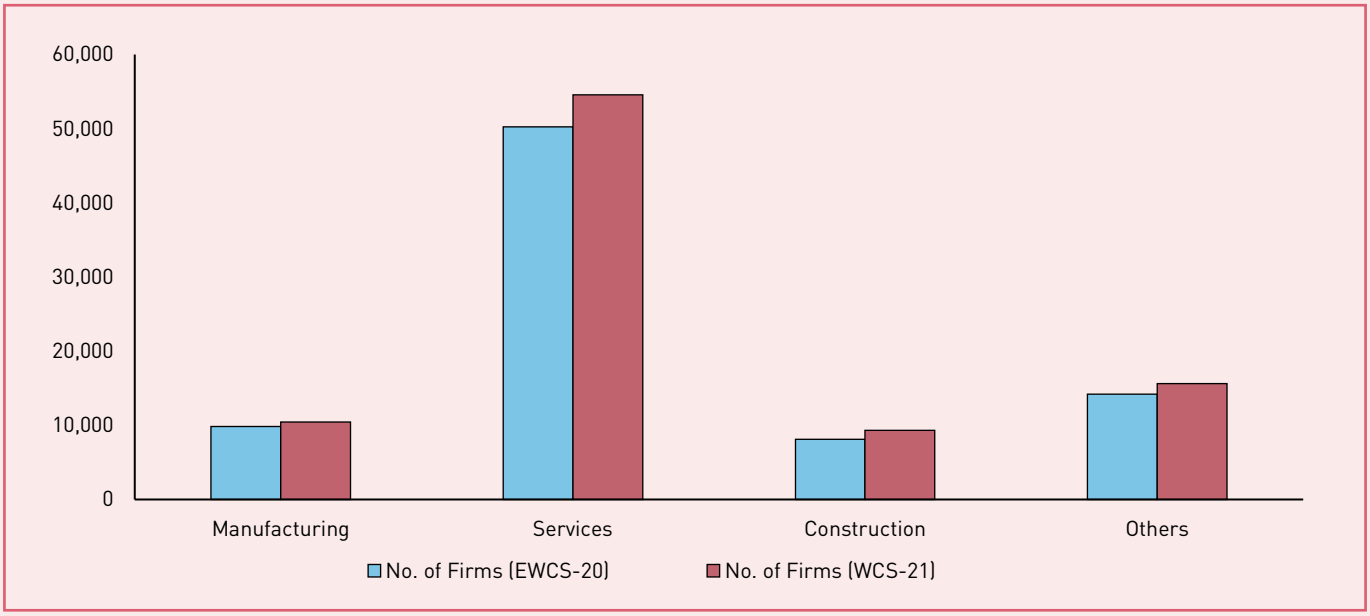
Key Firm Characteristics	FWLR	Non-FWLR Recipients
Proportion of Firms in Financial Distress	2.3 per cent	0.9 per cent
Average Total Employment	25	7

Notes: Employment level is based on the value in December 2019, while the proportion of firms in financial distress is based on the value in April 2020, which is the earliest date where all four variables used to construct the indicator (in Exhibit 2) are available.
Source: Authors' calculation, based on data from MOM and other sources indicated in Exhibit 2.

7 *Services and "Others" firms that received FWLR after August 2020 were those that provided services to the CMP sectors and hired foreign workers to do so during this period. Manufacturing firms that received FWLR after August 2020 were those in the Marine and Process sectors.*

Wage Credit Scheme. We studied only the impact of the Enhanced WCS paid out in June 2020 (EWCS-20) and the WCS paid out in March 2021 (WCS-21) because these were disbursed after major COVID-19 restrictions were implemented in Singapore (e.g., CB in April 2020). A total of $0.5 billion and $0.9 billion were disbursed through the EWCS-20 and WCS-21 payouts respectively, benefitting 97,912 and 98,121 firms.[8] Most WCS recipients were from the services sector (Exhibit 6) and were smaller firms with no more than 50 employees (Exhibit 7). Compared to non-recipients, WCS recipients had a slightly higher proportion of firms in distress prior to the pandemic and also higher average employment levels (Exhibit 8).

Exhibit 6: Number of WCS Recipients by WCS Payout and Sector



Notes: "Others" include Utilities, Postal and Courier sectors.
Source: IRAS

Exhibit 7: Number of WCS Recipients and Average Payout by Total Employment Size

Total Employment Size	EWCS-20		WCS-21	
	Number of firms	Average payout ($)	Number of firms	Average payout ($)
≤10	47,403	952	50,423	1,943
11-50	27,025	3,171	31,157	6,099
51-100	4,162	10,449	4,554	18,893
>100	3,763	77,818	3,766	145,047

Notes: Total employment is based on firm's employment size as at December 2019.
Source: Authors' calculation, based on data from IRAS and CPFB.

Exhibit 8: Key Firm Characteristics of WCS Recipients and Non-Recipients

Key Firm Characteristics	WCS	Non-WCS Recipients
Proportion of Firms in Financial Distress	9 per cent	8 per cent
Average Total Employment	31	7

Notes: Employment level is based on the value in December 2019, while the proportion of firms in financial distress is based on the value in April 2020, which is the earliest date where all four variables used to construct the indicator (in Exhibit 2) are available.
Source: Authors' calculation, based on data from IRAS and other sources indicated at the start of this section.

8 *12,436 out of the 111,727 firms that received the EWCS-20 and WCS-21 payouts were excluded from the study due to the lack of employment or wage data.*

METHODOLOGY

As the FWLR and WCS differed in terms of payout structure and frequency, different models were used to estimate the impact of each scheme on firm-level outcomes.

FWLR – Two-Way Fixed Effects Model

We restricted the sample of firms in our analysis to only those that had received some amount of FWLR. This is because the firms that received FWLR (i.e., firms that employed WPHs or S Passes) differed significantly from those that did not (i.e., firms that did not employ WPHs and S Passes). For example, firms that received FWLR would have been affected by restrictions specific to foreign workers (e.g., lockdown of foreign worker dormitories) unlike those that did not. Comparing the two groups of firms could thus lead to biased results. Instead, we estimated the impact of the FWLR by restricting the sample of firms to those that received the FWLR and comparing the outcomes of firms that received higher versus lower amounts of FWLR.

Even after restricting the sample, an important consideration when evaluating the causal impact of the FWLR is that firms that received more rebates might differ from those that received less (i.e., selection bias). For instance, firms that received more FWLR (i.e., hired more WPHs and S Passes) might be more reliant on the output produced or revenue generated by foreign workers, and thus be at a greater risk of financial distress during periods when COVID-19 restrictions prevented the foreign workers from working.

To mitigate such selection biases, we adopted a two-way fixed effects regression model[9] to account for differences across firms that could have affected the amount of FWLR they received. In particular, the model accounted for time trends that affected all firms (e.g., recession conditions) as well as unique firm characteristics (including those not observed in the dataset) that did not change during the period of study (e.g., firm managerial culture). To further isolate the impact of the FWLR, the impact of other major Government support measures, such as the JSS payments received by firms, was also controlled for in the regression model. By mitigating selection biases[10], the methodology employed provided more confidence that differences in firms' outcomes could be attributed to the receipt of FWLR.

Our regression specification was:

$$logY_{it} = \beta \times log\ \boldsymbol{cumFWLR_{it}} + \varphi' X_{it} + \gamma_i + \theta_t + \varepsilon_{it} \quad (1)$$

Where:

- Y_{it} represents firm-level outcomes (e.g., firm financial distress, S Pass employment, WPH employment) for firm i in month t. For firm financial distress, a binary outcome indicator was used;
- $\boldsymbol{cumFWLR_{it}}$ is the cumulative FWLR amount that firm i received in and prior to month t;
- X_{it} represents a set of controls that includes the disbursements under other major schemes (i.e., JSS and loan amounts under ESG's financing schemes) received by firm i in and prior to month t;
- γ_i and θ_t represent the firm-level (cross-sectional) and month (time) fixed effects respectively;
- β measures the average impact of an increase in the cumulative FWLR amount on firm-level outcomes;
- ε_{it} is the error term.

We also ran separate regressions using equation (1) for manufacturing, services and construction firms, as well as a regression specification where we interacted the cumulative FWLR variable with the firm's employment size category. The firm-size regression specification is as follows:

$$logY_{it} = \beta \times log\ \boldsymbol{cumFWLR_{it}} + \psi' firmsize_i \times log\ \boldsymbol{cumFWLR_{it}} + \theta' X_{it} + \gamma_i + \theta_t + \varepsilon_{it} \quad (2)$$

Where:

- $firmsize_i$ represents the employment size category of firm i proxied by its total employment size in December 2019 (categories: ⩽10, 11-50, 51-100, >100);
- All other variables are as defined in equation (1).

9 *Two-way fixed effects regression models have been widely used by academics and government researchers to evaluate the impact of various policies. See Toh et al. (2021) and Banerjee & Iyer (2005) for examples of studies that used two-way fixed effects regression models.*

10 *Nonetheless, selection bias could still exist if there were time-varying characteristics that affected the amount of FWLR that firms received but were not captured in the high-frequency dataset.*

WCS – Difference-in-Differences (DiD) Model

The regression model used for the WCS differed from that used for the FWLR as there were only two WCS payouts across the sample period, compared to the monthly FWLR. Given the 9-month gap between the payouts (June 2020 and March 2021), we did not sum up the EWCS-20 and WCS-21 payouts for firms that received both payouts. Instead, we examined the firm-level outcomes of WCS recipients (treated group) immediately after receiving a payout, in comparison to non-recipients (control group).

To mitigate selection bias and ensure that firms in the treatment and control groups were similar, we first conducted propensity score matching[11]. This method allowed us to select a set of control firms that were similar to treated firms based on pre-treatment variables (i.e., firm-level outcomes in December 2019, prior to the EWCS-20 and WCS-21 payouts).

After selecting a comparable control group, we used the following DiD regression specification to estimate the causal impact of the EWCS-20 and WCS-21 payouts, by comparing differences in the firm-level outcomes of the treated and control groups[12] after the disbursement of the payouts (treatment):

$$logY_{it} = \sum_{j}^{3}\sum_{k}^{2} \beta^{j,k} (WCS_i^j \times T_t^k) + \sum_{j}^{3} WCS_i^j + \sum_{k}^{2} T_t^k + \varepsilon_{it} \quad (3)$$

Where:

- Y_{it} represents firm-level outcomes (e.g., firm financial distress, employment[13]) for firm i in month t. For firm financial distress, a binary outcome indicator was used;
- WCS_i^j is a binary indicator for the combination of WCS payouts j received by firm i (i.e., whether the firm: (1) received EWCS-20 only, (2) received WCS-21 only, or (3) received both payouts);
- T_t^k is a binary indicator for whether month t is in period k. The two relevant periods were: (1) after the EWCS-20 payout but before the WCS-21 payout (i.e., between June 2020 to Feb 2021), or (2) after the WCS-21 payout (i.e., March 2021 onwards);
- $\beta^{j,k}$ represents the average impact of payout combination j in period k.

To obtain estimates of the impact of the WCS, we took the weighted average[14] of the following coefficients:

- $\beta^{1,1}$, the average impact of EWCS-20 on firms that only received the EWCS-20 payout, after the EWCS-20 payout but before the WCS-21 payout;
- $\beta^{2,2}$, the average impact of WCS-21 on firms that only received the WCS-21 payout, after the WCS-21 payout;
- $\beta^{3,1}$, the average impact of EWCS-20 on firms that received both payouts, after the EWCS-20 payout but before the WCS-21 payout.

Our results thus reflect the average impact of the two WCS payouts on the outcomes of treated firms immediately after the receipt of their first payout[15].

Separate regressions were also run using equation (3) for manufacturing, services and construction firms, as well as firms of various employment sizes.

11 Propensity score matching helps to reduce any biases in estimates by selecting a control group of non-treated firms with observed characteristics that are similar to treated firms before the treatment. It does so by computing a propensity score based on observed characteristics, indicating the probability that each firm will receive the WCS, and only selecting firms with scores similar to the treated firms but did not actually receive the WCS to be in the control group. The variables used for the matching include pre-treatment employment, average local wages, firm age, sector, entity type (e.g., local company) and firm outcomes.

12 We also checked that, prior to the EWCS-20 payout, firm-level outcomes in the treated and control group had the same trend over time. This is a common check to ensure the validity of a DiD model.

13 Specifically, we run regressions for total employment (i.e., Singaporeans, Permanent Residents and foreigners), local employment only (i.e., Singaporeans and Permanent Residents) and local workers earning less than or equal to $5,000.

14 Final estimates were weighted by the number of firms in each payout combination.

15 We excluded the $\beta^{1,2}$ and $\beta^{3,2}$ coefficients as these reflect effects in periods not immediately after a firm had received a WCS payout for the first time. Doing so ensures that the coefficients for firms across the different payout combinations were comparable.

RESULTS

Our findings showed that the FWLR helped to alleviate financial distress among firms that employed WPHs and S Passes. Specifically, firms that received an additional average amount of FWLR experienced a reduction in the likelihood of firm financial distress by 0.28 pp (Exhibit 9a). This reduction in the likelihood of firm financial distress was seen for firms across all sectors. We also observed that the FWLR had a statistically significant effect on reducing the probability of firm financial distress across firms of all employment sizes, suggesting that the FWLR was effective in helping firms to address their short-term payment obligations (Exhibit 9b).

Exhibit 9a: Impact of Additional Average FWLR on Firm-level Financial Distress, by Sector (pp)

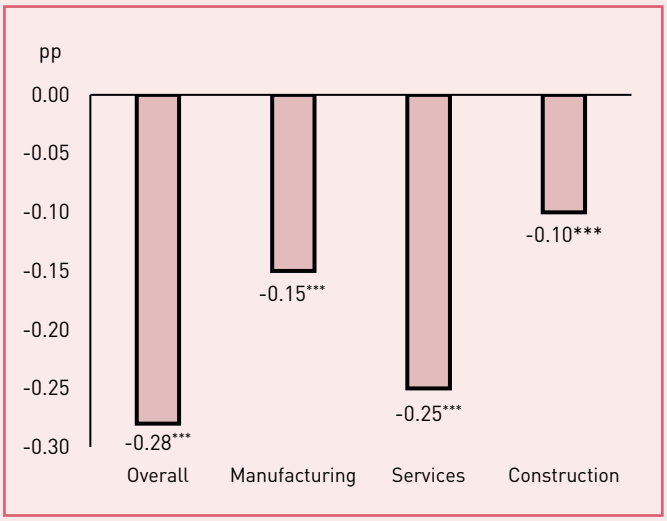
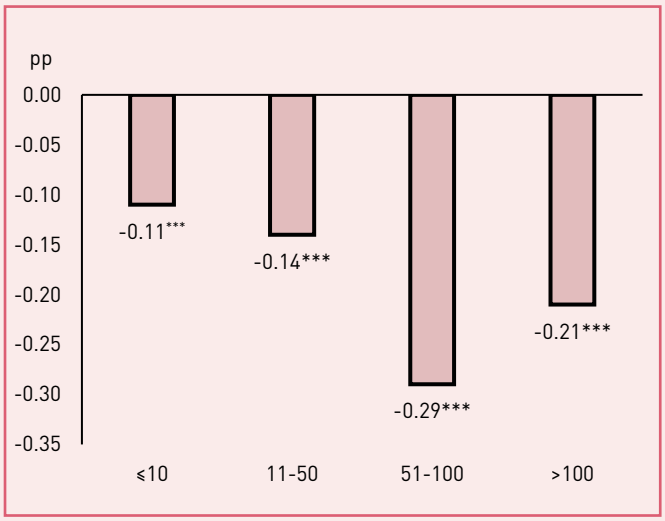


Exhibit 9b: Impact of Additional Average FWLR on Firm-level Financial Distress, by Total Employment Size (pp)



Statistical significance: *** p<0.01, ** p<0.05, *p<0.10
Notes: Bars with bolded borders indicate estimates that are statistically significant at the 10 per cent level.

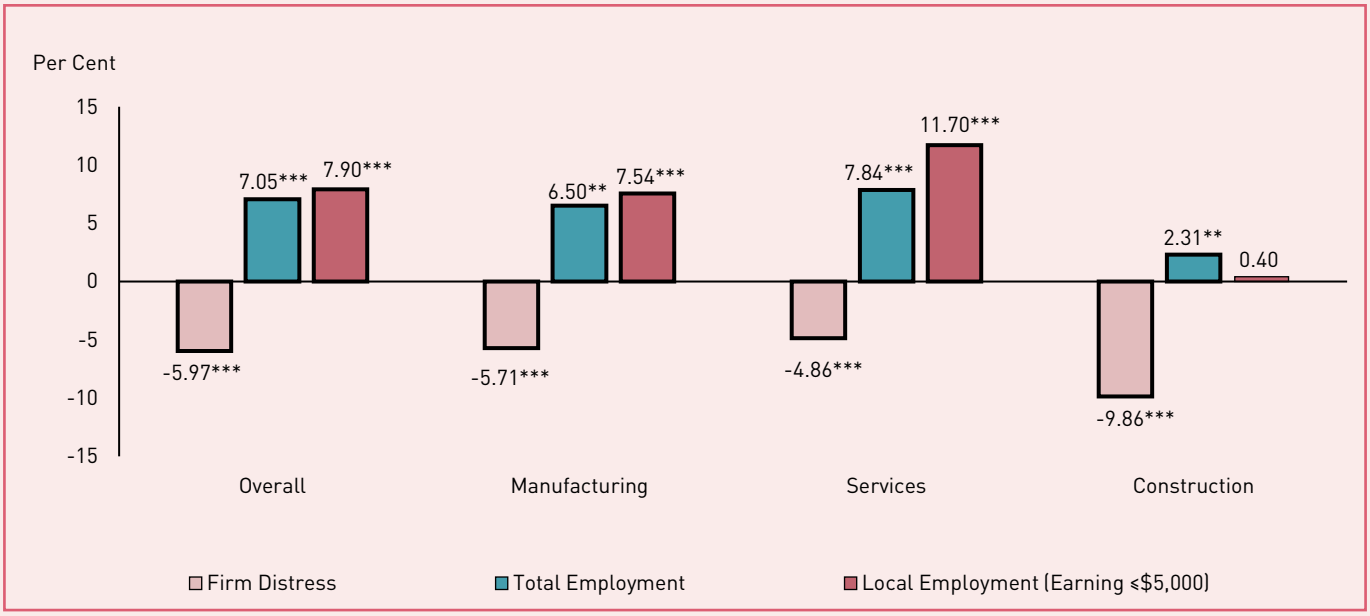
We further observed that the FWLR helped firms to retain their foreign workers. Specifically, in the construction sector, an additional average FWLR increased the retention of WPH and S Passes by 0.70 per cent and 0.42 per cent respectively (Exhibit 10). This is not surprising, as firms in this sector are dependent on foreign workers to carry out activities at construction worksites, and the rebate would have helped to offset the cost of retaining these workers amidst the disruptions during the COVID-19 pandemic.

Exhibit 10: Impact of Additional Average FWLR on Firm-level Foreign Employment in the Construction sector (per cent)

Statistical significance: *** p<0.01, ** p<0.05, *p<0.10
Notes: Bars with bolded borders indicate estimates that are statistically significant at the 10 per cent level.

We saw similar effects for the WCS payouts, with the payouts alleviating firm financial distress and helping firms to hire and retain workers. Specifically, the WCS payouts led to a 5.97 pp fall in the likelihood of firm financial distress and a 7.05 per cent increase in total employment in a firm on average (Exhibit 11). The decline in likelihood of firm financial distress and increase in total employment was observed for firms across all sectors. The increase in total employment was driven by the hiring and retention of local workers earning ⩽ $5,000.

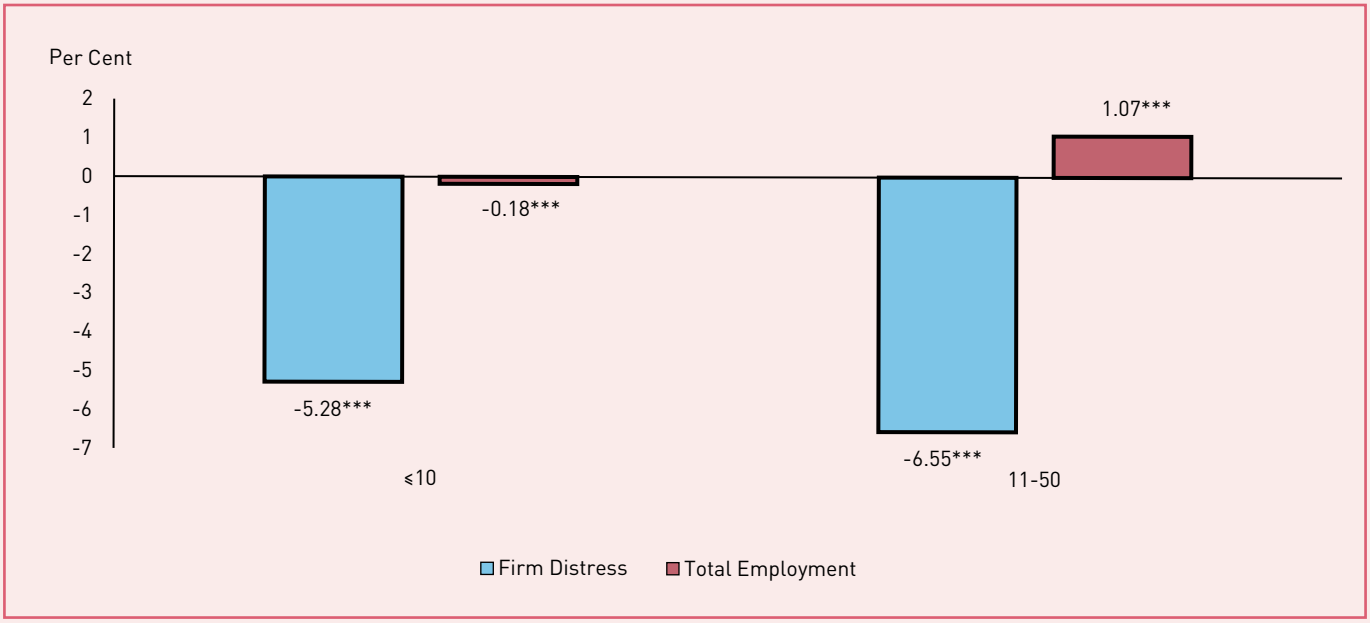
Exhibit 11: Average impact of WCS on Firm-level Outcomes, Overall and by Sector (per cent)



Statistical significance: *** p<0.01, ** p<0.05, *p<0.10
Notes: (1) Impact on firm distress refers to the percentage-point (pp) impact; (2) Bars with bolded borders indicate estimates that are statistically significant at the 10 per cent level.

Breaking down the impact of the WCS payouts by firm size, we observed that while the payouts helped to increase the hiring and retention of workers in firms with 11-50 employees, it did not lead to an increase in employment in very small firms (i.e., those with ⩽10 employees) (Exhibit 12). This may be due to these firms having less scope to increase employment with their WCS payouts, given the smaller amounts of cash received (see Exhibit 6). However, we saw that receipt of the payouts decreased the probability of financial distress for firms with ⩽10 employees, as well as those with 11-50 employees, suggesting that the additional cashflow afforded by the WCS was effectively used to fulfil short-term payment obligations for the smaller firms.

Exhibit 12: Average impact of WCS on Firm-level Outcomes by Total Employment Size (per cent)



Statistical significance: *** p<0.01, ** p<0.05, *p<0.10
Notes: (1) Impact on firm distress refers to the percentage-point (pp) impact; (2) Bars with bolded borders indicate estimates that are statistically significant at the 10 per cent level; (3) There were insufficient firms with ⩾51 employees to create a comparable control group for analysis as over 97 per cent of firms with ⩾51 employees were recipients of a WCS payout.

CONCLUSION

Our study found that both the FWLR and WCS payouts helped to lower the probability of firm financial distress and also supported the hiring and retention of workers. This highlights the importance of providing cash transfers to firms to help them fulfil short-term cash obligations and retain workers (and hence capabilities) during times of heightened economic stress.

The high-frequency nature of this analysis implies that the estimated impact of the schemes should be seen as the short-term impact and is meant to provide a prompt sensing of the schemes' effectiveness during the pandemic. A more comprehensive study to analyse the longer-term benefits and costs of the schemes should be conducted once annual data on firm-level outcomes (e.g., financial information, value-added) are available.

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